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ABSTRACT

Integrating Vygotsky's sociocultural theory of the mind and cognitive science's computational model, this book focuses on how the computational mind uses language to mediate the internal and external worlds during thought. The first part of the book establishes the basis for unifying social and computational approaches to mind through language. Chapter 1 examines the internalist-externalist dichotomy. Chapter 2 examines the reigning paradigm in computational mind science and proposes a framework to integrate externalism and internalism and transcend the false dichotomy. Chapter 3 spells out the basic issues of Vygotsky and cognitive science and argues their unity in terms of the ways that language manages and codes mind-world tradeoffs. The second part of the book explicitly integrates Vygotsky and cognitive science, focusing on three issues: subjectivity, control and the language for thought, and breakdown. Chapter 4 argues that subjectivity has three modes--nonconscious processing, consciousness, and metaconsciousness--and that the properties of metaconsciousness are useful in reinterpreting recent cognitive science experiments on problem solving, meta-knowledge, and distributed representation. Chapter 5 gives a computational interpretation of the Vygotskian notion of private speech and maintains that humans have a language for thought, a cognitive and behavioral control language. Chapter 6 looks at how certain disorders such as Williams syndrome disrupt speech for mental and behavioral regulation by delinking the language "of" thought from the language "for" thought and maintains that these syndromes provide the crucial negative evidence required for all putative mental phenomena. Contains approximately 500 references. (KB)

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